

REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 1-11 remain pending in this application, with Claims 1, 4, 7 and 10 being independent. Claims 1-6 have been allowed. By this Amendment, Applicant has amended Claims 1 and 10 to put the same in even better form.

Claims 10 and 11 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 3,694,088 (Gallagher, et al.). Claims 7-9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gallagher, et al. Applicant traverses these rejections.

As recited in independent Claim 7, Applicant's invention is directed to a measuring method including steps of measuring a wavefront of a first linearly polarized light from an object to be measured, and measuring a wavefront of a second linearly polarized light from the object to be measured. The polarization orientation of the first and second lights differ from each other.

The Gallagher, et al. patent is also directed to wavefront measurement. That patent describes the rotation of quarter-wave plate 35 about an axis parallel to the axis of the light propagation, to produce a phase difference between reference beam 30 and information beam 40 (see column 3, lines 46-53). Applicant submits, however, that quarter-wave plate 35 is disposed on the reference arm of the interferometer (see column 2, lines 61-65), not the measurement arm (i.e., the optical path between the beam splitter 25 and the object 45) of the interferometer. Consequently, quarter-wave plate 35 does not affect the polarization orientation of information beam 40. Thus, the Gallagher, et al.

patent does not describe measuring wavefronts of first and second linearly polarized lights from the object to be measured, wherein the polarization orientations of those lights differ.

The Office Action states that it would have been obvious to one of ordinary skill in the art at the time of the invention to vary the polarization in the path of the object to be measured, rather than the reference path. Applicant respectfully disagrees. The Gallagher, et al. patent describes changing reference beam 30 from linearly polarized light to circularly polarized light (or from circularly polarized to linearly polarized) using the circular polarizer 33 or rotatable quarter-wave plate 35. That patent does not describe the polarization *orientation* of the linearly polarized light beam, for information beam 40 or reference beam 30. Thus, the Gallagher, et al. patent does not set forth the polarization orientation for light beams incident on object 45.

Accordingly, Applicant submits that the Gallagher, et al. patent fails to disclose or suggest at least the features of measuring a wavefront from a first linearly polarized light from the object to be measured, measuring a wavefront of a second linearly polarized light from the object to be measured, wherein the polarization orientation of the first and second linearly polarized lights differ, as recited in independent Claim 7.

As recited in independent Claim 10, Applicant's invention is directed to an interferometer. The interferometer includes a light source for emitting linearly polarized light and a polarization orientation changing means for changing a polarization orientation of the polarized light incident on an object to be measured.

As discussed above, the Gallagher, et al. patent describes that rotatable quarter-wave plate 35 is disposed on the reference arm of the interferometer, not the measurement arm. For this and other reasons discussed above, Applicant submits that the

Gallagher, et al. patent also fails to describe or suggest at least the feature of polarization orientation changing means for changing a polarization orientation of polarized light incident on an object to be measured, as recited in independent Claim 10.

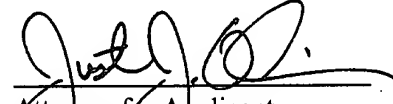
The remaining claims in the present application not already allowed are dependent claims which depend from the above-discussed independent claims, and thus are patentable over the applied patent for reasons noted above with respect to those claims. In addition, each recites features of the invention still further distinguishing it from the applied document. Applicant requests favorable and independent consideration thereof.

Therefore, Applicant requests withdrawal of the rejections under 35 U.S.C. §§ 102 and 103.

This Amendment After Final Rejection is an earnest attempt to advance prosecution and is believed to clearly place this application in condition for allowance. The actual amendments presented herein are minor in nature. Applicant requests entry of this Amendment under 37 C.F.R. § 1.116.

Applicant's undersigned attorney may be reached in our Washington, D.C.
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Respectfully submitted,



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